

ASPECTS REGARDING THE INCIDENCE OF ACUTE VIRAL HEPATITIS A IN BIHOR COUNTY

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Abstract

The incidence of acute viral hepatitis A in Romania (11.6 cases/ 100,000 inhabitants) is a negative aspect of this pathology compared with the situation in the European Union. Bihor County is among the counties with high incidence nationwide. In recent years (2011-2014) there was a decrease in the number of patients with hepatitis A, from 197 cases in 2011 to 52 cases in 2014. This is due to application of prophylactic measures. These measures need to be assimilated more pronounced, especially in rural areas and in Roma communities - where the incidence of hepatitis A is higher (up to 70.5% of cases).

Keywords: hepatitis, incidence, prevention, cases

INTRODUCTION

Acute viral hepatitis A represents a significant public health problem, especially because its transmission is linked to the failure of respecting the minimum standards of hygiene.

Information on the frequency of hepatitis A can be obtained by analysing hospital records and notifications to health authorities or by serological surveys. In many countries, these data are limited and seriously underestimate the true frequency of the disease. At a conservative estimate, the incidence of disease in most developed countries is probably four to five times higher than the number of notifications. (Gust I.D., 1992).

The source of infection with hepatitis A virus is the sick man (7 days previous jaundice and 10 -14 days during jaundice) and, also, asymptomatic patients.

The route of transmission is basically fecal-oral.

The most common way of transmission is direct contact between infected person and receptive person. The virus can be transmitted via dirty hand, contaminated water, contaminated food insufficiently heat-treated, contaminated objects, dishes, toys, toilets, etc.

The responsiveness is general; the disease dominates in childhood.

The incubation period is about 2-6 weeks. (<http://www.hep.ro/>).

Clinical features:

- debut with general phenomena: fever, generalized muscle pain, respiratory catarrh phenomena;

- digestive manifestation: decreased appetite, nausea, vomiting, abdominal pain, followed by hyperchromic urine and color of jaundice of the skin and mucous membranes.

The clinical morbidity of hepatitis A probably only represents 20% of cases of hepatitis A virus infection (Janusz C., 2000)

The evolution is favorable. The disease produce specific immunity for life; it is not chronic.

Prophylaxis targets the following aspects (www.mayoclinic.org):

- consumption of drinking water only from authorized sources analyzed
- not to be used for drinking water from rivers, lakes and irrigation systems
- the correct elimination of faecal waste from household
- preparation and hygienic handling of foods especially those without heat-treatment or requiring multiple manipulations
- washing hands with soap and water after using the bathroom, before eating
- health education programs for the population
- hepatitis A vaccine administered preventively in endemic areas.

MATERIAL AND METHODS

This study is a descriptive, retrospective and comparative analysis of the situation regarding the incidence of acute viral hepatitis type A. There are presented data on the incidence of viral hepatitis A in Bihor County in the years between 2011-2014; they are compared with those recorded in Cluj County, namely those nationwide. Information was acquired from the database of the Public Health Departments Bihor and Cluj, respectively from the WHO database.

RESULTS AND DISCUSSIONS

In 2011 the incidence of acute hepatitis A was of 192 cases; it was similar to 2010. These cases were identified in a family context or collectively. There were 10 situations of family infection including 2 members of the family, 9 situations of family infection including 3 members of the family, 4 situation of family infection including 5 members of the family, 1 situation of family infection including 6 members of the family and 1 situation of family infection including 8 members of the family.

There have been 3 community infections (involving more then 10 persons each). Regarding the area of origin of cases, 73.81% of the cases were registered in villages related to the towns of Beius and Margita.

In 2012 the incidence of acute hepatitis A (170 cases) is less than in 2011 (192 cases).

Family outbreaks (with more than 2 cases) amounted to a total of 32 outbreaks. Collectivities with multiple outbreaks were: Tinca (21 cases), Diosig (12 cases), Cefa (6 cases) .

Regarding the area of origin of cases of acute hepatitis A, 73.68% of the cases were from rural areas (in villages related to the towns of Oradea and Salonta)

In 2013 the incidence of viral acute hepatitis A was almost 50% less than the previous year. These cases were distributed in 18 outbreaks of infection. (Fig. 1)

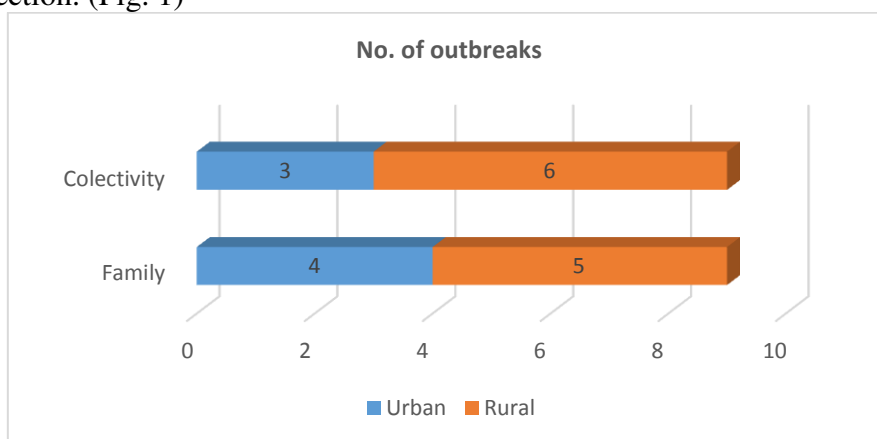


Fig. 1. Distribution of hepatitis A outbreaks regarding the area of origin in 2013

In 2014 there were 16 outbreaks of acute hepatitis A, representing 52 cases. Distribution of these outbreaks depending on the context and area of origin is shown in Fig. 2

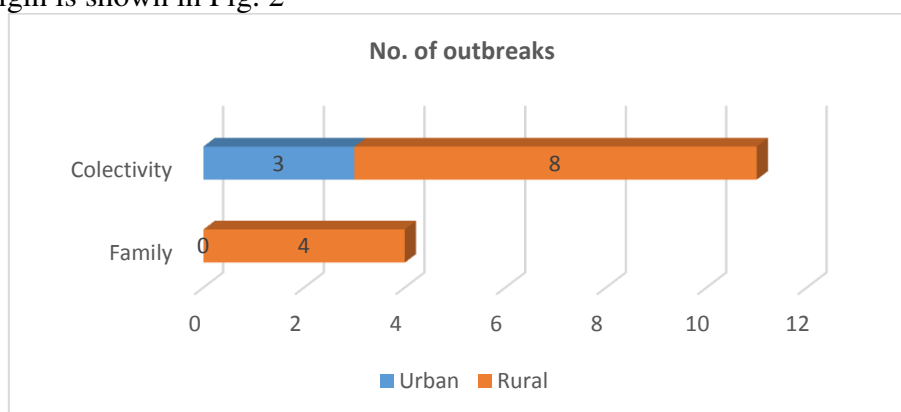


Fig. 2. Distribution of hepatitis A outbreaks regarding the area of origin in 2014

Cumulative data clearly shows that most cases of acute hepatitis A are registered in rural areas (Fig. 3.) Between 49.5% and 70.5% of all cases are registered at Roma people. In collectivities, 44.4% to 58.3% of cases are identified in preschool, primary or secondary education.

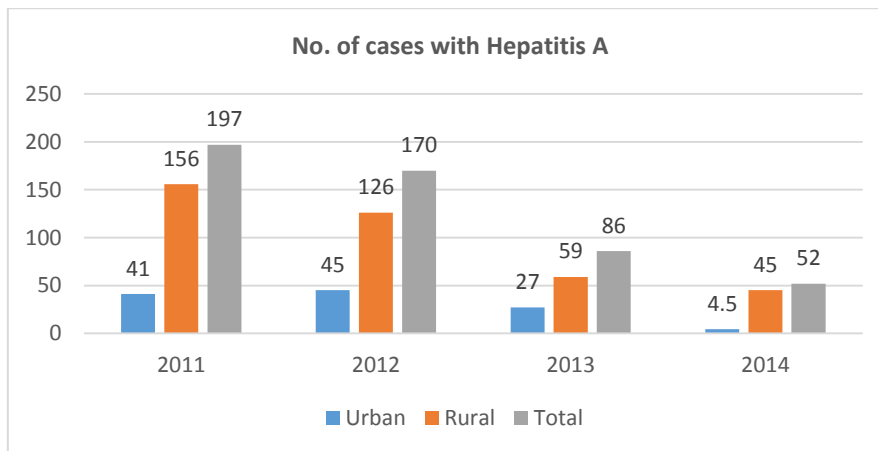


Fig. 3. The evolution of Hepatitis A cases in Bihor County during 2011-2014

In the case of multiple community outbreaks there have been taken action for vaccination. In all cases there were conducted epidemiological investigation, clinical and laboratory surveillance and disinfection measures were applied.

Despite the regression of incidence of hepatitis A, the number of cases in Bihor County is higher than the one recorded in Cluj County (Fig. 4.)

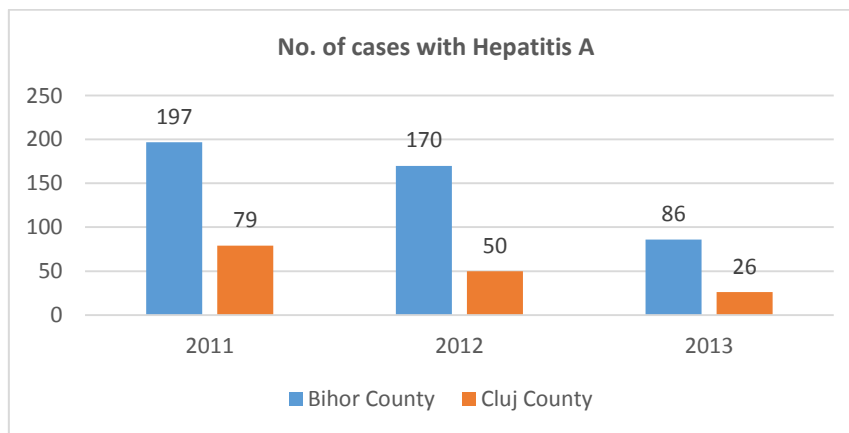


Fig. 4. Comparison between Bihor County and Cluj County

In national context, Bihor County is among the counties with an increased incidence of acute viral hepatitis A. The highest incidence was recorded in Satu Mare County (60.2‰), followed by Salaj County (46.5‰) and Dambovita County (34.2‰).

Overall, nationally, the incidence of viral hepatitis type A in 2011 was 11.6‰ meaning 13.9% lower compared to 2010 (16.2‰) when Romania ranks 3rd among incidents recorded in EU.

Although in Romania vaccination against hepatitis type A is not included in the National Immunization Program, it unfolds like activity in

health programs and is applied in emergency situations caused by natural disasters, outbreaks from established contacts or in the case of groups at risk. (<http://www.cnscbt.ro/>)

Following vaccination in the situations mentioned above, in the last 10 years, the incidence of reported cases of hepatitis type A has followed a downward trend, as seen in Fig. 5.

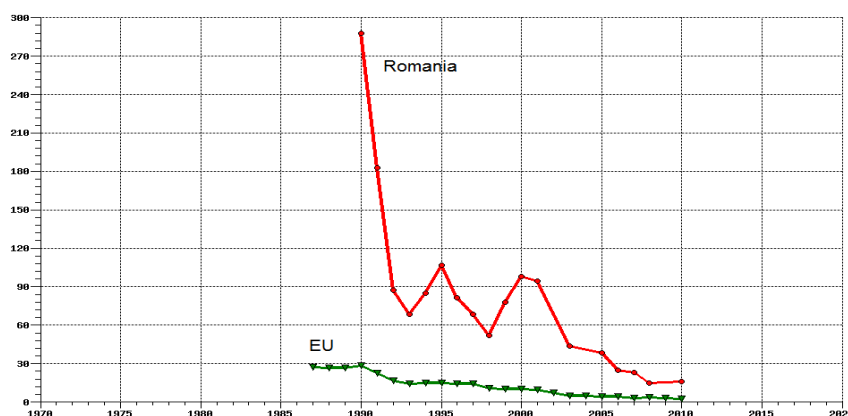


Fig. 5. Evolution of hepatitis A incidence in Romania compared to EU
(Source: WHO/Europe, European HFA Database, April 2014)

This situation resembles to the one in the USA. In the USA, following implementation of routine hepatitis A vaccination of children, hepatitis A rates have declined to historic lows, accompanied by substantial changes in the epidemiologic profile. Greater decreases in the age groups and regions where routine vaccination of children is recommended likely reflect the results of implementation of this novel vaccination strategy. Continued monitoring is needed to verify that implementation continues to proceed and that low rates are sustained. (Annemarie Wasley et al., 2005)

In other countries (Israel), universal children-only immunization program demonstrated not only high effectiveness of hepatitis A vaccination, but also marked herd protection, challenging the need for catch-up hepatitis A vaccination programs. (Ron Dagan et al., 2005). Following the implementation of universal hepatitis vaccination with a single dose to children at 12 months of age, hepatitis A rates have declined substantially in Argentina. Monitoring is needed to verify that vaccination continues to proceed and that low rates are sustained. (Vacchino M. N., 2008)

CONCLUSIONS

- There is an enhanced process of decreasing the incidence of acute viral hepatitis A nationwide, that is also felt in Bihor County.

- The incidence is higher in rural areas or in Roma communities .
- Collective outbreaks are identified most frequently in schools from pre-school, primary and secondary education.
- Children need education and vaccination because they play an important role in hepatitis A virus transmission. Therefore, routine childhood vaccination would be wellcome, having a great impact on eliminating a major source of infection.
- A routine antihepatitis A vaccination could be the measure necessary to drastically reduce the incidence of hepatitis A.
- There is a need for dissemination of what hepatitis A represents and of the methods by which it can be prevented.

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